

CAS 79-34-5

Substance name 1,1,2,2-Tetrachloroethane

Toxicity

1,1,2,2-Tetrachloroethane (1,1,2,2-TCA) is listed as a carcinogen by authoritative sources.^{1,2} Evidence is based on liver cancers in male and female mice and inconclusive information in humans.^{2,3} 1,1,2,2-TCA is also acutely toxic in people and animals; the primary effects are damage to liver and kidney, the nervous system, and blood system.⁴

Exposure

1,1,2,2-TCA was historically used as a solvent and extractant. According to multiple sources, it is no longer widely used for this purpose.^{3,4,5} In Europe, 1,1,2,2-TCA is only used as a feedstock for the production of other chlorinated hydrocarbons. It may also be an incidental byproduct of other production processes for chlorinated hydrocarbons such as the production of vinyl chloride.⁴ Testing of children's products by the Danish EPA detected 1,1,2,2-TCA in 2 out of 2 baby feeding pillow pellets.⁶ It was not detected in a large biomonitoring study of the general U.S. population in 2003-2004.⁷

References

1. California Office of Environmental Health Hazard Assessment. List of Chemicals Known to the State to Cause Cancer or Reproductive Toxicity. Feb 5, 2010.
http://www.oehha.org/prop65/prop65_list/files/P65single020510.pdf.
2. U.S.EPA, Integrated Risk Information System (IRIS). 1,1,2,2 tetrachloroethane (last revised 2006)
<http://www.epa.gov/iris/subst/0265.htm>.
3. California EPA, Office of Environmental Health Hazard Assessment. Public Health Goals for Chemicals in Drinking Water: 1,1,2,2-Tetrachloroethane. September 2003.
<http://oehha.ca.gov/water/phg/pdf/Ph41122TCA92603.pdf>.
4. UNEP, OECD Screening Information Dataset (SIDS)for High Production Volume Chemicals: Initial Assessment Report for 1,1,2,2-Tetrachloroethane, October 2002.
<http://www.inchem.org/documents/sids/sids/79345.pdf>.
5. National Institutes of Health, National Library of Medicine Hazardous Substances Data Bank
<http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB> Accessed May 2010.
6. Danish Ministry of the Environment, Environmental Protection Agency. Surveys on Chemicals in Consumer Products. Report 90, 2008. http://www.mst.dk/English/Chemicals/Consumer_Products/Surveys-on-chemicals-in-consumer-products.htm.
7. Centers for Disease Control and Prevention (CDC), Fourth National Report on Human Exposure to Environmental Chemicals, December 2009. http://www.cdc.gov/exposurereport/data_tables/.